Amanda Doucette

hi@amandadoucette.com
Pronouns: they/them
Updated December 13, 2024

EDUCATION

2025 McGill University
PhD Student, Linguistics
Dissertation working title: *"Compensation and Causation in the Lexicon"*
Committee: Morgan Sonderegger, Timothy J. O'Donnell, Michael Wagner

2017 University of Massachusetts Amherst
B.A. Linguistics, Summa Cum Laude
Commonwealth Honors College Honors with Greatest Distinction

2017 University of Massachusetts Amherst
B.S. Computer Science, Summa Cum Laude
Commonwealth Honors College Honors with Greatest Distinction

PUBLICATIONS

2024 Amanda Doucette, Timothy J. O'Donnell, Morgan Sonderegger, and Heather Goad. **Investigating the universality of consonant and vowel co-occurrence restrictions**. *Glossa: a journal of general linguistics* 9(1).
DOI: 10.16995/glossa.9373

2024 Amanda Doucette, Ryan Cotterell, Morgan Sonderegger, and Timothy J. O'Donnell. **Correlation Does Not Imply Compensation: Complexity and Irregularity in the Lexicon**. *Society for Computation in Linguistics 7(1)*, 117-128.
DOI: 10.7275/scil.2136

2017 Doucette, Amanda. **Inherent Biases of Recurrent Neural Networks for Phonological Assimilation and Dissimilation.** *Proceedings of the 7th Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2017)*, 35–40.
DOI: 10.18653/v1/W17-0705

PEER-REVIEWED CONFERENCE PRESENTATIONS

2023 **Morphological Irregularity and Phonotactic Complexity.**
Amanda Doucette and Timothy J. O'Donnell. Montreal-Ottowa-Toronto-Hamilton Phonology/Phonetics Workshop. Hamilton, ON. March 26, 2023.

2022 **Identity, Similarity, and the OCP: A model of co-occurrence in 107 languages.**
Amanda Doucette, Morgan Sonderegger, Timothy J. O'Donnell, and Heather Goad. **LabPhon 18.** June 25, 2022.

TEACHING

2023 Teaching Assistant, **McGill University.**
Computational Linguistics (COMP 445), Fall 2023.
Instructor: Eva Portelance.

2023 Teaching Assistant, **McGill University.**
Computational Linguistics (COMP 445), Winter 2023.
Instructor: Jacob Hoover.

2022 Teaching Assistant, **McGill University.**
Introduction to Linguistics (LING 201), Winter 2022.
Instructors: Francisco Torreira and Martina Martinović.

2021 Teaching Assistant, **McGill University.**
Language Acquisition 1 (LING 355), Fall 2021.
Instructor: Heather Goad.

GUEST LECTURES

2024 **Causal Inference and Causal Discovery**
Advanced Quantitative Methods (LING 683, Instructor: Morgan Sonderegger).
McGill University. Fall 2024.

2023 **N-gram Models**
Computational Linguistics (COMP 445, Instructor: Eva Portelance).
McGill University. Fall 2023.

PROFESSIONAL EXPERIENCE

2020 – 2020 Senior Software Engineer, **Originate, Inc.**
2017 – 2020 Software Engineer, **Originate, Inc.**
Worked with a team of engineers and designers on software products for companies in a variety of industries, wrote backend, frontend, and machine learning code in Node.js, Python, Go, and Rust, reviewed and provided feedback on other engineers' code, set up continuous integration testing and deployment processes, developed neural network models for machine learning research projects, and discussed applications of AI and machine learning with sales and business development staff.

2015 – 2015 Information Technology Leadership Program Intern, **EMC**
Managed @EMCSupport Twitter account, wrote Python scripts and Excel macros to maintain and update analytics spreadsheets and data visualizations.

2014 – 2015 Contract Linguist, **Appen Butler Hill**
Wrote phonetic transcriptions of various spoken and written language for language technology projects.

RESEARCH ASSISTANTSHIPS

2023 – pres. Casual Research Assistant, **McGill University.** (Morgan Sonderegger)
Assist other graduate students with programming, software, and statistics problems as needed.

2014 – 2017 REU, **Computing Constraint-based Derivations: Phonological Opacity and Hidden Structure Learning.** NSF Grant 1424077. (Joe Pater)
Researched computational models of phonological pattern learning and representation, implemented a harmonic grammar solver with linear programming, and began implementation of a typology calculator for harmonic grammar learning problems in Python.

2015 – 2017 Research Assistant, **UMass Cognitive Science of Language Lab.** (Brian Dillon)
Wrote Python software for processing eye-tracking while reading data, wrote stimuli sentences and questions for sentence processing experiments, and ran eye-tracking and self-paced reading studies.

2013 – 2017 Research Assistant, **UMass Phonetics Lab.** (John Kingston)
Ran eye-tracking and speech perception experiments, wrote code for running behavioral experiments, and participated in lab meeting discussions.

SOFTWARE

2013 Amanda Doucette, Brian Dillion, and Elizabeth Schotter. **SideEye.**
Open-source Python package for processing raw data from eye-tracking while reading experiments and calculating dependent measures for analysis.
https://pypi.org/project/sideeye

VOLUNTEER SERVICE AND COMMUNITY OUTREACH

2019 Invited talk for visiting students from Osaka College of Design and IT.
Originate, Inc., Los Angeles, CA. *"Introduction to AI and Machine Learning."*

2019 Invited talk at Soho House Ludlow Tech Club.
Soho House, New York, NY. *"Introduction to AI and Machine Learning."*

2017 Volunteer Teacher, **Boys & Girls Club of Greater Holyoke, MA.**
Designed and taught a one semester weekly Lego robotics class for middle school students. Course included basic programming concepts, problem solving exercises, and presentations of current robotics research, with a focus on highlighting researchers from diverse backgrounds.

AWARDS

2024 **Graduate Student Travel Award (for SCiL 2024).**
Centre for Research on Brain, Language and Music (CRBLM). May 7, 2024.

2022 – 2026 **Bourse de doctorat en recherche (Doctoral Research Scholarship).**
Fonds de recherche du Québec. June 2, 2022. $84,000 CAD.

2022 **Graduate Student Travel Award (for LabPhon 18).**
Centre for Research on Brain, Language and Music (CRBLM). April 26, 2022.

2020 – 2023 **Richard H. Tomlinson Doctoral Fellowship.**
McGill University. July 6, 2020. $35,000 CAD/year, 3 years.

2017 **Outstanding Achievement Award in Information and Computer Sciences.**
University of Massachusetts Amherst. May 12, 2017.

2013 – 2017 **Dean's List Honors.**
University of Massachusetts Amherst. Fall 2013 – Spring 2017.

2016 **Phi Beta Kappa Honor Society.**
University of Massachusetts Amherst. Inducted May 6, 2016.

2015 **Course Citation, COMPSCI 311: Introduction to Algorithms.**
University of Massachusetts Amherst. Fall 2015.

2015 **Course Citation, COMPSCI 250: Introduction to Computation.**
University of Massachusetts Amherst. Spring 2015.

2014 – 2015 **Rachel and John Morton Honors Scholarship.**
University of Massachusetts Amherst. April 25, 2014.

TECHNICAL SKILLS

Programming languages
Python, R, Julia, Javascript, Typescript, Clojure, Go

Machine Learning
PyTorch, TensorFlow, Keras, Scikit-learn

Web development
HTML, CSS, React, Node.js, Flask, Wordpress

Writing
LaTeX, R Markdown, Quarto

Databases
SQL, PostgreSQL, MongoDB

Data Analysis
Multivariate regression, Bayesian regression, mixed-effects modeling, probabilistic graphical models, causal inference, causal discovery, generalized additive mixed models, hypothesis testing, data visualization, experimental design

Other
Docker, Apptainer, continuous integration testing, Git, Slurm, AWS, code review, Linux, MacOS, Windows